

REMARKS

Claims 1 and 3-11 remain in this application.

Claim 1 was object to for awkward grammar used in lines 9-10 "end portions of the separated band is connected" and at line 16 "the connection piece is snapped is rotated together with the cap body" and line 17 the clause "on the other hand".

Claim 1 has been amended to remedy the stated basis of objection. Withdrawal of the objection is solicited.

Claim 2 has been incorporated into claim 1.

Claims 12-14 are new and find support in the application as originally filed, as discussed below. No new matter is entered by way of these amendments.

Substantive Rejections

Claims 1-6, 8, 9 and 11 were rejected as anticipated by TSUJIGUCHI 5,573,128.

Claim 7 was rejected as obvious in further view of CSASZAR 4,343,408.

Claim 10 was rejected as obvious in further view of KNEER 5,415,307.

The rejections are traversed.

In the present invention, the cap and the band are formed integral with each other and remain integrally connected

upon removal from the mouth portion of the spout. This is not the case with the prior art.

A review of the specification disclosure may prove useful.

With reference to Figure 1, the invention provides a mouth plug unit 1 sealing the container's pouring spout 20 with an open/close cap 2. As viewed from an upper portion of the open/close cap 2, when the open/close cap 2 is rotated in the clockwise direction, the cap 2 is screwed downward with the pouring spout 20 and the mouth plug unit 1 seals the mouth portion 21, and on the contrary, when the cap 2 is rotated in the counterclockwise direction, the open/close cap 2 is disengaged from the pouring spout 20.

Reference is now made to Figures 2 to 4. The open/close cap 2 comprises a tubular cap body 3 and a band 10 provided at the lower end of the cap body 3 extending in the circumferential direction of the cap body. The band 10 is disposed is connected to the lower end surface 3b of the cap body 3 through coupling pieces 12 and 13. The band 10 is divided into two pieces 11, 11 at its circumferential direction, and these pieces 11 are connected, at their circumferential ends, to each other by means of connection pieces 14.

The band pieces 11, 11 constituting the band 10 are coupled to the lower end surface 3b of the open/close cap 2 by means of coupling pieces 12 and 13 at circumferentially two

portions of the band 10. The coupling pieces 12 and 13 are disposed on the inner periphery side of the band pieces 11, 11.

Claw portions 15 and 16 are formed to the inner peripheral surface of each of the band pieces 11 as well as overlapping protruded portions 17 and 18.

Figure 4 shows the positional relationship between two protruded portions 17 and 18 and the details of the shapes thereof. The high (larger) protruded portion 18 displacing the band pieces after the cutting off of the connection pieces 14 at the time of riding over the ratchet during the rotation of the cap.

Figures 5-6 illustrate ribs disposed extending laterally from the outer peripheral surface of the mouth portion 21. When the band pieces 11 are pushed radially inward, the protruded portions 17 and 18 abut against the tip end surface of the rib 44. The connection pieces 14 are then cut off, at the time when the open/close cap 2 is loosened.

With reference to Figures 8 to 10, the operation of the cap opening process is disclosed. As the open/close cap 2 is rotated in the cap opening direction X, the ratchet 41 is engaged with the claw portion 15, and the ratchet 43 is engaged with the claw portion 16. When the open/close cap 2 is further rotated, from this state, the ratchets 41, 43 and the claw portions 15, 16 are deeply engaged together. Circumferential tension is applied to the band 10 and the connection pieces 14 are hence cut off.

Pulling force is applied to the connection pieces 14, and as shown in Figure 9, the connection pieces are cut off so as to be separated in the circumferential direction.

The band pieces 11 deform. The coupling piece 13 positioned on the rear side in the cap maintains the coupled condition, without being cut off, between the band pieces 11 and the cap body 3. On the other hand, the coupling piece 12 positioned on the front side and having thin thickness and narrow width is applied with a tensioning load and is then cut off.

Thus, in the present invention, when the cap is removed from the packaging container, the cap and the band are screwed together and remain integrally connected when removed from the mouth portion of the spout, whereas in the cited reference, upon removal of the cap, the cap and band is separated, that is, that when the cap is screwed and removed from the mouth portion of the spout, the band is separated from the cap and remains with the spout.

In this connection, in the Office Action, the Examiner stated "the band (4) is provided with at least one portion (12) for separating the band in the circumferential direction (direction normal to Fig. 1), end portions of the separated band is ---". However, the band of the Tsujiguchi reference seems to be separated in the vertical direction (that is, column 3, lines 3-6 of the Tsujiguchi reference, there is disclosure "the peripheral band is secured at the time of opening the cap by

utilizing engaging protrusions such as ratchet pawls formed on the outer peripheral surface of the neck portion of the container."). From this disclosure, it will be understood that the band remains to the packaging container side when opened (when the cap is removed).

In this regard, the structure of a tether web ratchet drive tamper indicating band closure of Julian reference may show the integral structure of the band and the cap, which is cited as of record in the outstanding Office Action. In the Julian reference, however, the tether web or rib 36 is protruded outward, for example, as shown in Fig. 7.

In the structure of the present invention, the coupling piece is provided so as to connect the inner surface side of the cap body as defined by the pending claim 2 and new claim 13.

More specifically, in the present invention of claim 1, there is defined that the band has at least one portion at which the end portions of the band are connected to each other by a connection piece, and when the cap is screwed to be opened, the connection piece is cut off and the distance between the end portions of the band is opened in the circumferential direction thereof, thus the cap being removed from the mouth portion of the spout together with the band portion. Furthermore, the band is positioned below the lower surface of the cap body so as to be attached to the lower portion of the cap body by a coupling

piece. The coupling piece connects the inner surface side of the band and the lower surface of the cap body (claim 2).

That is, when the cap is screwed to open the packaging container, the band is also screwed in the circumferential direction and the connection piece connecting both the ends of the band is torn and separated, and when the band is removed from the mouth portion of the packaging container, the band is removed together with the cap by means of the coupling piece.

From the above structural difference, the invention as recited by pending claim 1 is novel over Tsujiguchi et al. Claim 13 is novel for these same reasons.

In the present invention, the band is removed together with the cap by means of the coupling piece when the cap is opened, whereas in the other cited reference, both the members are separated when the cap is opened and removed. In addition, in the structure of the present invention, the coupling piece is provided so as to connect the inner surface side of the cap body as defined by the pending claim 2. The subject feature of the location of the connection piece of the pending claim 2 can achieve the function of preventing foreign material from contacting the coupling piece.

The features of new claims 12 and 14 are also not taught or suggested by the prior art. Specifically, the prior art does not teach the further feature of the protruding portions each comprising two overlapping trapezoidal protruded portions

projecting from the inner surface of the band radially toward a center axis of the cap, where the opening rotation of the cap body produces the circumferential tension applied to the band to cut off the connection pieces with the connection pieces being separated in the circumferential direction by a larger one of the two overlapping trapezoidal protruded portions displacing the band during the opening rotation.

The dependent claims are allowable at least for depending from an allowable claim.

Reconsideration and allowance of all the claims are respectfully requested.

This amendment is believed to be fully responsive and to put the case in condition for allowance. Entry of the amendment, and an early and favorable action on the merits is earnestly requested. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Should there be any matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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